

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) In a packet data communication system comprising a source base station subsystem (BSS), a target BSS, and a mobile station serviced by the source BSS, a method for detecting a cell reselection without an intervention of a Serving GPRS Support Node (SGSN) comprising steps of:

maintaining a record of at least one active mobile station;

receiving, from a mobile station of the at least one active mobile station, a message requesting allocation of a communication channel at the target BSS;

in response to receipt of the communication channel allocation request, allocating a communication channel at the target BSS to the mobile station;

informing the mobile station of the allocated communication channel;

receiving, by the target BSS from the mobile station, first uplink data that includes a mobile station identifier associated with the mobile station; ~~and~~

determining, based on the first uplink data and by reference to the record, that the mobile station has initiated a cell reselection;

receiving second uplink data from the mobile station;

routing the second uplink data to the SGSN; and

determining, by the SGSN and based on the second uplink data, that the mobile station has initiated a cell reselection.

2. (Original) The method of claim 1, further comprising a step of, upon determining that the mobile station has initiated a cell reselection, removing data stored in a buffer associated with the mobile station and the source base station subsystem.

3. (Original) The method of claim 2, wherein the step of removing data comprises a step of deleting data stored in a buffer associated with the mobile station and the source base station subsystem.

4. (Original) The method of claim 1, further comprising a step of, upon determining that the mobile station has initiated a cell reselection, terminating an allocation of a communication channel to the mobile station at the source base station subsystem.

5. (Currently Amended) The method of claim 1, further comprising a step of acknowledging the first uplink data.

6. (Currently Amended) The method of claim 1, wherein the ~~uplink data comprises first uplink data, and wherein the method further comprises steps of:~~ receiving second uplink data from the mobile station, wherein the second uplink data does not include the mobile station identifier included in the first uplink data; and ~~routing the second uplink data to a Serving GPRS Support Node.~~

7. (Cancelled)

8. (Original) In a packet data communication system comprising a source base station subsystem (BSS), a target BSS, and a mobile station serviced by the source BSS, a method for detecting a cell reselection without an intervention of a Serving GPRS Support Node (SGSN) comprising steps of:

- maintaining a record of at least one active mobile station;
- receiving, from a mobile station of the at least one active mobile station, a message requesting allocation of a communication channel at the target BSS;
- in response to receipt of the communication channel allocation request, allocating a communication channel at the target BSS to the mobile station;
- informing the mobile station of the allocated communication channel;
- initiating a count down of a predetermined time period; and
- when no uplink data is received via the source BSS after the initiation of the count down and prior to the expiration of the predetermined time period, determining that the mobile station has performed a cell reselection.

9. (Original) The method of claim 8, further comprising a step of, when uplink data is received via the source base station subsystem after the initiation of the count down and prior to the expiration of the predetermined time period, determining that the mobile station is still serviced by the source base station subsystem.

10. (Original) The method of claim 8, further comprising a step of, when no uplink data is received via the source BSS after the initiation of the count down and prior to the expiration of the predetermined time period, removing data from a buffer associated with the mobile station and the source BSS.

11. (Original) The method of claim 10, wherein the step of removing data comprises a step of deleting data stored in a buffer associated with the mobile station and the source base station subsystem.

12. (Original) The method of claim 8, further comprising a step of, when no uplink data is received via the source base station subsystem after the initiation of the count down and prior to the expiration of the predetermined time period, terminating an allocation of communication resources to the mobile station at the source base station subsystem.

13. (Currently Amended) A packet control unit comprising:

a memory device that maintains a record of at least one active mobile station; and
a processor operably coupled to the memory device that receives, from a mobile station of at least one active mobile station, a message requesting allocation of a communication channel at a target base station subsystem (BSS), allocates a communication channel at the target BSS to the mobile station, informs the mobile station of the allocated communication channel, receives, from the mobile station and via the target BSS, first uplink data, ~~and~~ determines, based on the first uplink data and by reference to the record, that the mobile station has initiated a cell reselection, receives second uplink data from the mobile station, and routes the second uplink data to a Serving GPRS Support Node (SGSN), wherein the second uplink data indicates to the SGSN that the MS has initiated a cell reselection.

14. (Original) The packet control unit of claim 13, further comprising a buffer operably coupled to the processor, wherein the buffer is associated with the mobile station and with a source base station subsystem and wherein, upon determining that the mobile station has initiated a cell reselection, the processor removes data stored in the buffer.

15. (Original) The packet control unit of claim 14, wherein the processor removes data from the buffer by deleting the data stored in the buffer.
16. (Original) The packet control unit of claim 14, wherein the buffer associated with the mobile station and with a source base station subsystem comprises a first buffer and wherein the processor removes data from the buffer by transferring the data to a second buffer associated with the mobile station and with the target base station subsystem.
17. (Original) The packet control unit of claim 13, wherein the processor, upon determining that the mobile station has initiated a cell reselection, further causes a termination of an allocation of a communication channel to the mobile station at the source base station subsystem.
18. (Currently Amended) The packet control unit of claim 13, wherein the processor further acknowledges the first uplink data.
19. (Currently Amended) The packet control unit of claim 13, wherein the ~~uplink data comprises first uplink data, wherein the packet control unit receives second uplink data from the mobile station, wherein the second uplink data does not include the mobile station identifier included in the first uplink data, and wherein the processor further routes the second uplink data to a Serving GPRS Support Node.~~
20. (Original) A packet control unit comprising:
 - a memory device that maintains a record of at least one active mobile station;
 - a timer; and
 - a processor operably coupled to each of the memory device and the timer that receives, from a mobile station of at least one active mobile station, a message requesting allocation of a communication channel at a target base station subsystem (BSS), allocates a communication channel at the target BSS to the mobile station, initiates a count down of a predetermined time period with reference to the timer and, when no uplink data is received by the packet control unit via the source base station subsystem after the

initiation of the count down and prior to the expiration of the predetermined time period, determines that the mobile station has performed a cell reselection.

21. (Original) The packet control unit of claim 20, wherein, when uplink data is received via a source base station subsystem after the initiation of the count down and prior to the expiration of the predetermined time period, the processor further determines that the mobile station is still serviced by the source base station subsystem.

22. (Original) The packet control unit of claim 20, wherein, when no uplink data is received via the source base station subsystem after the initiation of the count down and prior to the expiration of the predetermined time period, the processor further removes data from a buffer associated with the mobile station and the source base station subsystem.

23. (Original) The packet control unit of claim 20, wherein, when no uplink data is received via the source base station subsystem after the initiation of the count down and prior to the expiration of the predetermined time period, the processor further causes a termination of an allocation of communication resources to the mobile station at the source base station subsystem.